

REDACTED VERSION

Grants Mining District Five Year Plan

July 14, 2017

Overview of the Five Year Plan

Report to the public the progress made in implementing the 2010 Five-Year Plan and to memorialize priorities and activities for the next five years in the Grants Mining District

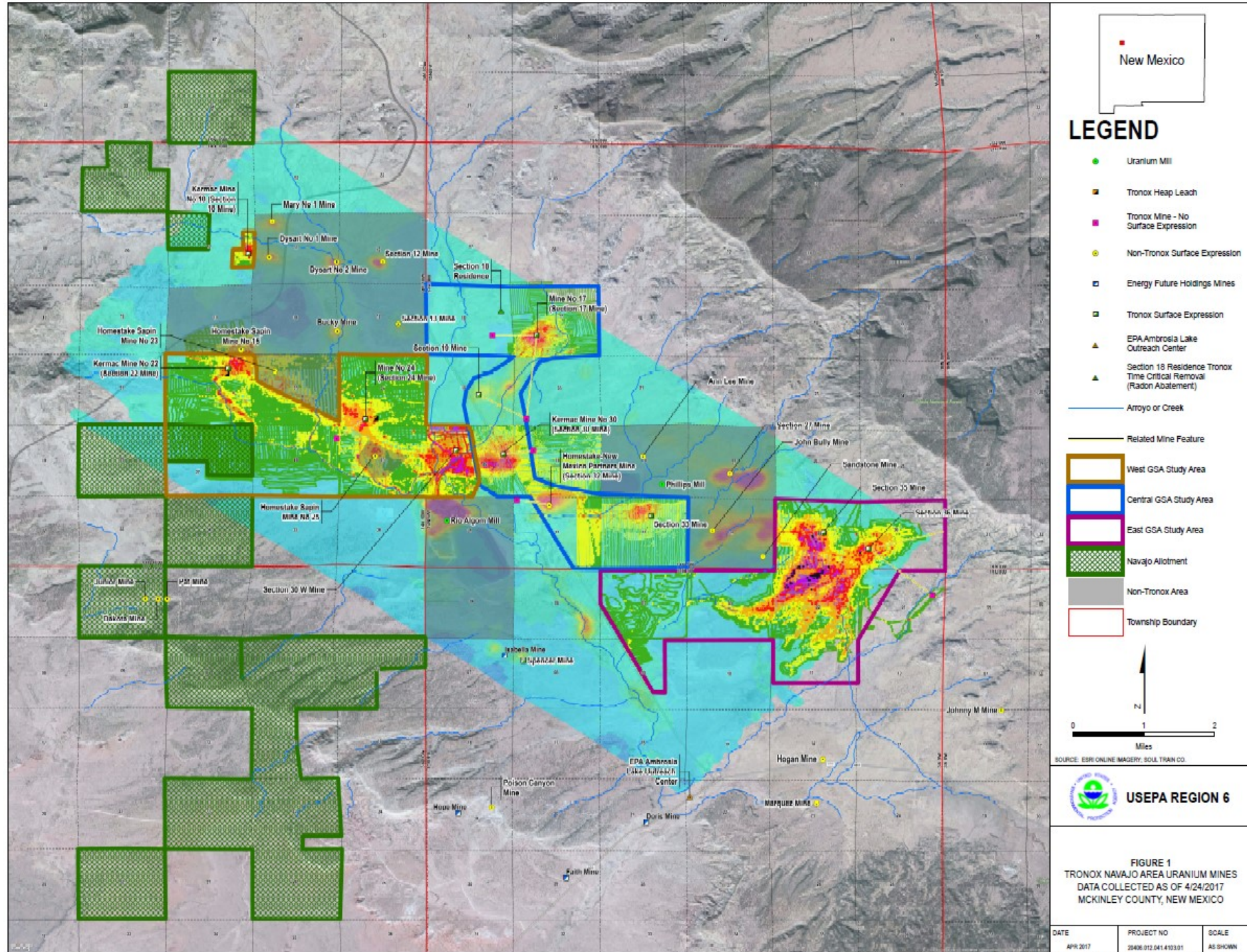
- I. Assess water supply sources for contamination
- II. Assess and cleanup legacy uranium mines
- III. Assess, cleanup, and perform long-term management of former uranium milling sites
- IV. Assess and clean up contaminated structures and properties
- V. Communicate and coordinate with communities

EPA Region 6 Activities

- Ambrosia Lake District / Tronox Mines
- Johnny M Mine
- Energy Future Holdings Bankruptcy – Hope, Doris, Faith, and Isabella
- Rio Puerco
- Jackpile-Paguate Mine
- Homestake
- UNC

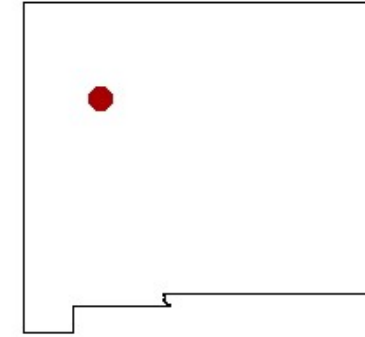
Ambrosia Lake District / Tronox Mines

- 12 Surface Expressions
- Funded by Tronox Settlement
- Three Geographical Areas
 - East – National Remedy Review Board in the Fall
 - Central – Removal Assessment ongoing
 - West – Removal Site Assessment Completed



Johnny M Mine

EPA Region 6



**Relative Area of the
Johnny M. Mine
Property**

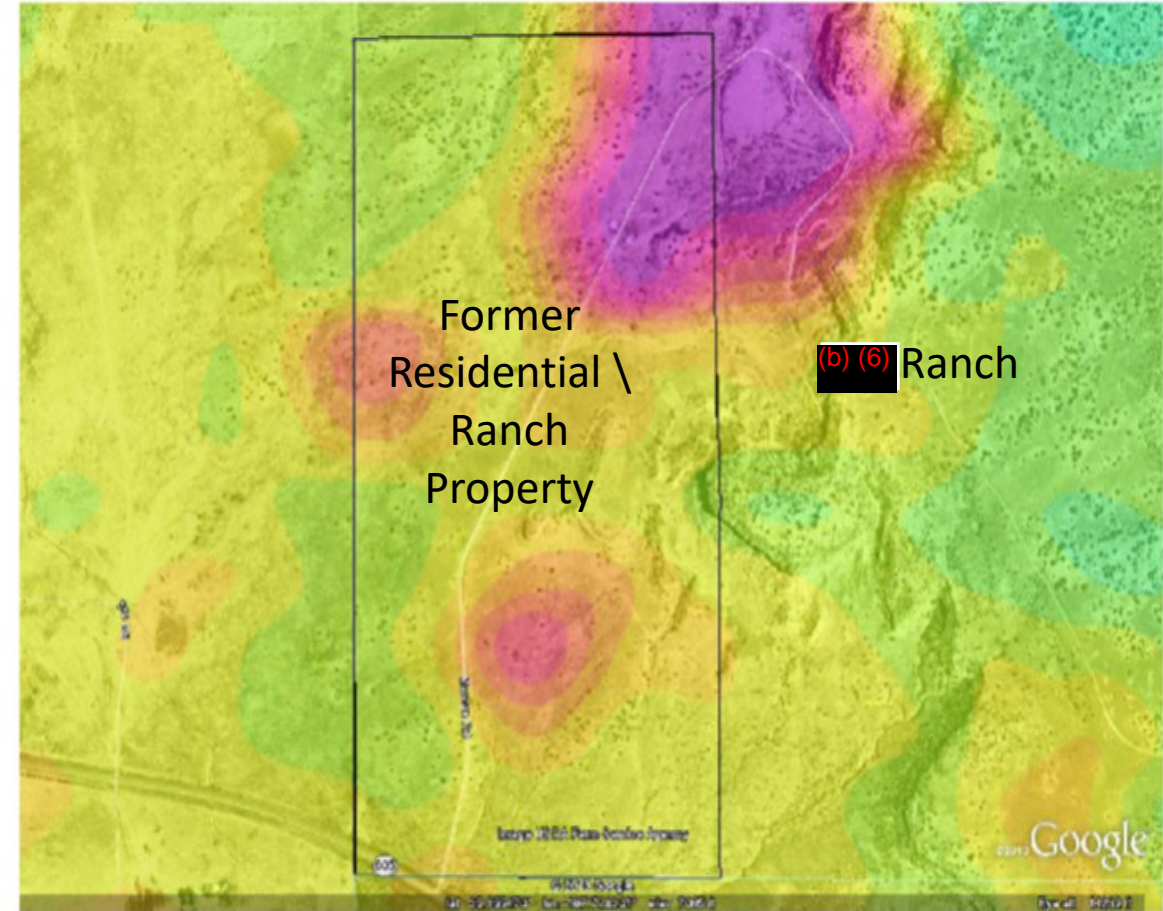


Legend

-  NM Roads
-  NM State Boundary
-  Property Boundary

Johnny M Mine

- Site was identified on 2009 ASPECT overflight as area of concern.
- EPA 6 initiated a removal site evaluation on the Residential\Ranch Property in early 2011.



Johnny M Mine

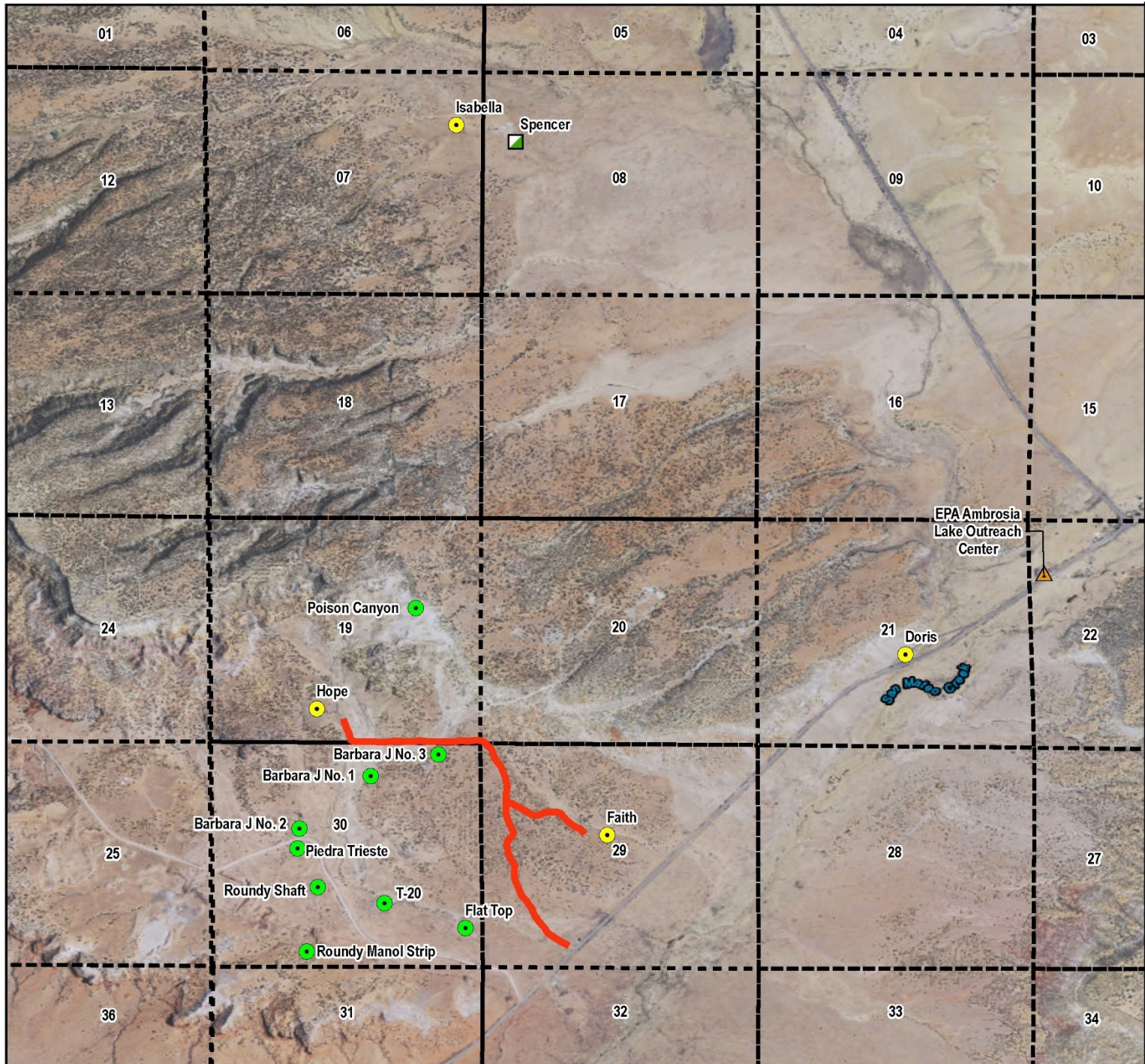
- Operated as a wet mine from 1972 – 1982 by Ranchers Exploration (predecessor to Hecla Mining).
- Uranium mill tailings were used to backfill the mine. Process originated under State license and oversight until 1986; transferred to NRC.
- March 2011 - EPA 6 began negotiations with Hecla and notified them of intent to temporarily relocate residents and business.
- April 2011 - residents and business temporarily relocated (6 months + extension).

Johnny M Mine

- February 2012 - Hecla buys out the adjacent Residential \ Ranch Property.
- August 2012 - Hecla signs AOC to conduct an EE/CA for the Johnny M Mine Site.
- June 2015 – EPA accepts Hecla's draft EE/CA
- July (Expected) – EE/CA Published for Public Comment

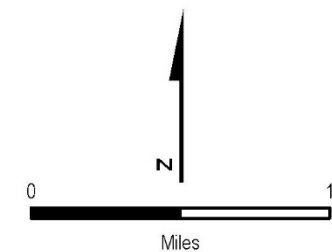
Energy Future Holdings Bankruptcy

- Isabella, Hope, Faith, Doris Mines
- EFH declared bankruptcy in 2014
- Texas Utilities Fuel Company (TUFECO) MMD Registration Card
- \$5 million recovery
- Removal Assessments started in January 2017



LEGEND

- Non-Project Mine Location
- Mine Location
- Tronox Surface Expression
- ▲ EPA Ambrosia Lake Outreach Center
- Road
- - - Section Boundary



TDD: 5/Weston-042-17-001
CERCLIS ID: NMN000607349
SOURCE: ESRI ONLINE IMAGERY



USEPA REGION 6

FIGURE 1
MINE LOCATION MAP
MCKINLEY COUNTY, NEW MEXICO

DATE	PROJECT NO	SCALE
FEB 2017	20406 012.005.1055.01	AS SHOWN

Rio Puerco Mine

EPA Region 6

Rio Puerco Mine

- Aerial Assessment Suggests elevated levels of Uranium around the mine shaft and at the retention ponds
- Aerial Assessment suggests no migration of contamination towards To'hajillee Chapter
- BLM is Regulatory Lead

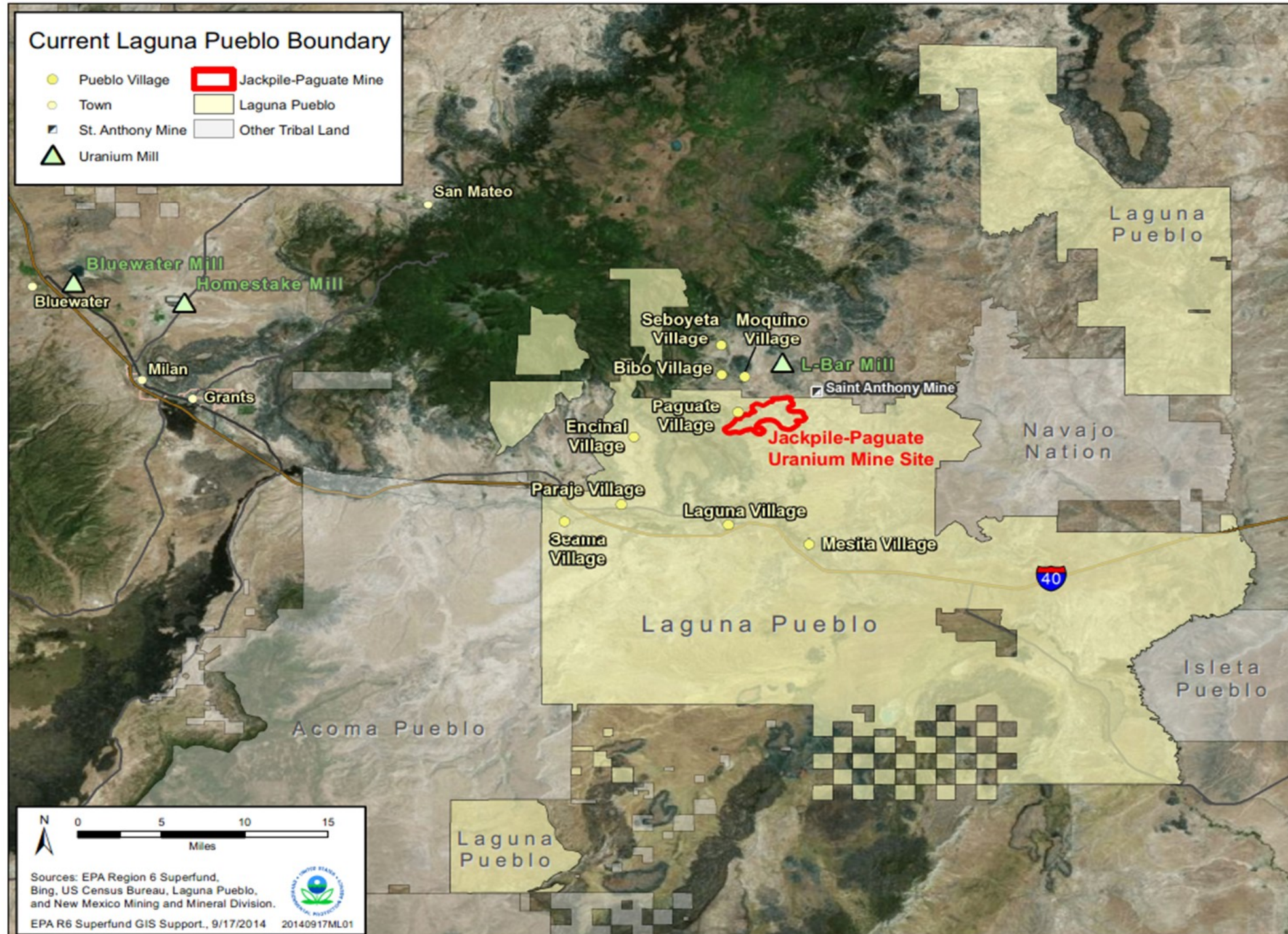


Jackpile-Paguate Uranium Mine

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Current Laguna Pueblo Boundary

- Pueblo Village
- Town
- St. Anthony Mine
- Uranium Mill
- Jackpile-Paguate Mine
- Laguna Pueblo
- Other Tribal Land



Sources: EPA Region 6 Superfund, Bing, US Census Bureau, Laguna Pueblo, and New Mexico Mining and Mineral Division.

EPA R6 Superfund GIS Support, 9/17/2014 20140917ML01

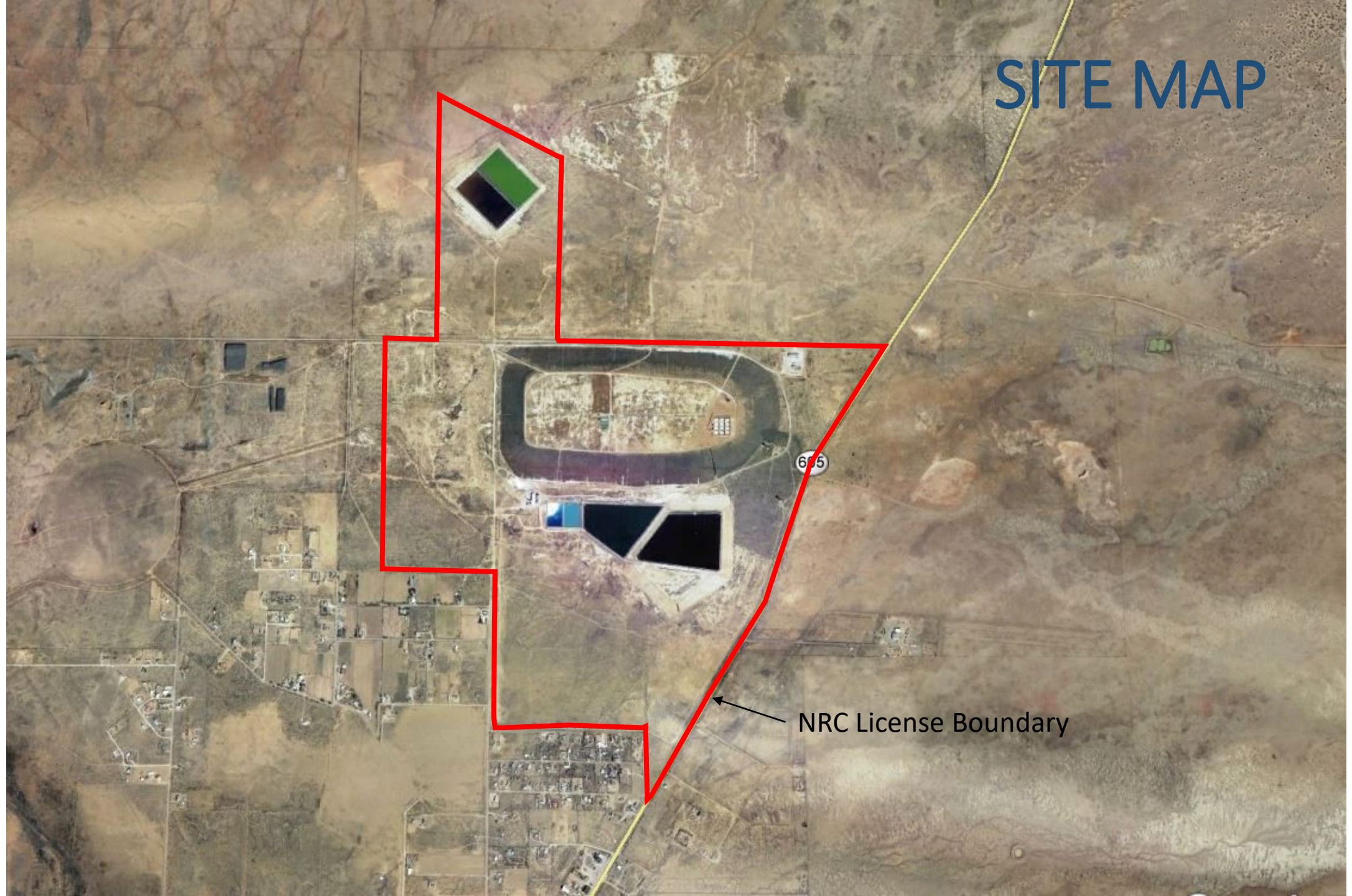
Jackpile-Paguate Uranium Mine

- Operated 1953-1982
- 400 million tons of rocks were moved within the mine area
- 25 million tons of uranium ore were transported to Anaconda's Bluewater Mill.
- The Site was listed December 12, 2013.
- RI/FS being conducted by PRP under an AOC

Homestake Mining Company Superfund Site

EPA Region 6

SITE MAP



NRC License Boundary

Site Chronology

- 1958 to 1990 – Mill operation
- Late 1970s – Contamination observed in private wells
- 1983 – Agreement between HMC and EPA
 - Connect residences to Milan water supply
 - Pay water bills for 10 years
- 1983 – Site listed on NPL
- 1989 – EPA signs No Action ROD for off-site radon (OU3)
 - Ground Water (OU1) and Surface Reclamation (OU2) deferred to NRC
- 2013 – EPA initiates RI/FS (CERCLA Equivalency)

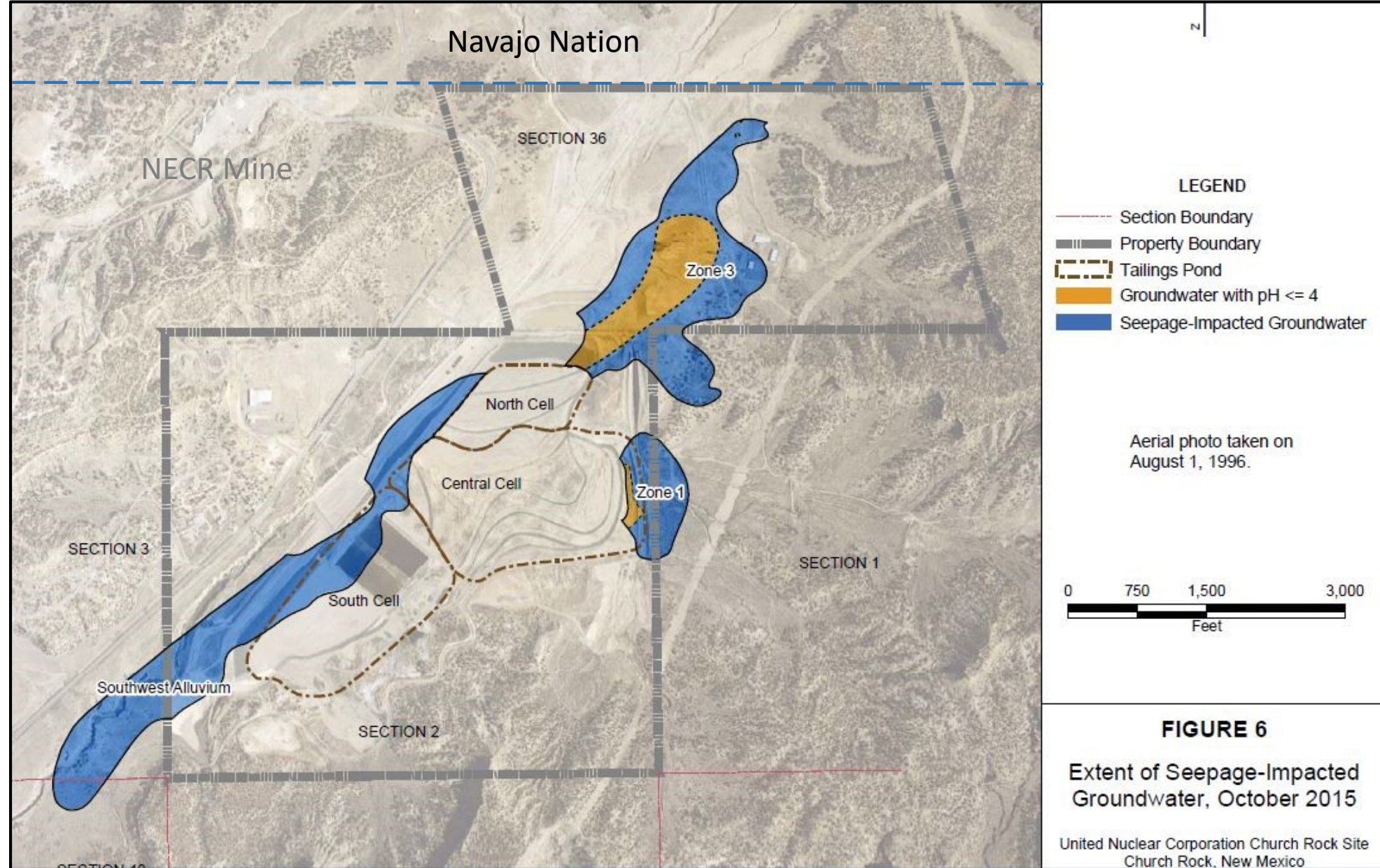
Site Description

- Tailing Seepage Impacts Multiple Aquifers
- HMC implementing GW Restoration
 - GW Collection and Injection System
 - Expanded RO Treatment Plant
 - Zeolite Treatment System
 - 2 Lined Collection Ponds
 - 3 Lined Evaporation Ponds
- Cleanup Levels represent Background Water Quality
 - Uranium (160 ppb) is 5 times MCL
- EPA/USGS Reassessing Background 2016-2017

United Nuclear Corporation Superfund Site

EPA Region 6

Site Map



Uranium Mill and Tailing Disposal Site

- Regulated by NRC and EPA
- Supplemental Feasibility Study ongoing
 - Assess effectiveness of remedy
- Mine water discharge is anthropogenic background
 - Poor water quality
- To be permanent repository for NECR mine waste
 - Repository design ongoing (Region 9 Lead)
 - Requires NRC approval

Conceptual Extent of Mine Water Discharge - 2026

